Attorney Docket No.: E0886

ABSTRACT OF THE DISCLOSURE

A network node has multiple physical layer devices (PHYs), multiple media access controllers (MACs), and means for gathering information regarding the capabilities of other nodes on the network. The node capability information may be gathered using hardware or software, and may involve gathering information from data frames received by the node, and/or from capability and status announcement frames received by the node. Hardware means for gathering the node capability information may include a node discovery block which examines all or portions of received frames, and which includes a cache for selectively storing node capability information relating to other nodes. The node discovery block may also include means for determining a network topology of the network, using the node capability information gathered. Further, the node discovery block may includes means of communicating node capability information in response to queries from a hardware transmit processing block. The node capability information gathered and the node topology determined may be utilized in selecting one of the MACs as an active MAC for monitoring a network medium, and/or in selecting one of the PHYs as an active PHY for transmission of frames onto the network medium. The PHYs of the interface in an exemplary embodiment are able to transmit and receive data frames or packets which are in accordance with different home phoneline networking alliance (HPNA) specifications, for example, HPNA 1.0 and HPNA 2.0.

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